

The Link between Workplace Surveillance and Public Health Surveillance: Example of a Web-Based Surveillance System for Sharps Injuries among Health Care Workers in Massachusetts

Angela Laramie, MPH and Letitia Davis, ScD
Occupational Health Surveillance Program
Massachusetts Department of Public Health

- OSHA and MDPH require recording of sharps injuries
- MDPH requires annual reporting by hospitals of sharps injury data

National Surveillance System for Health Care Workers (NaSH)

- Monitors:
 - immunization and tuberculin skin testing
 - exposure events to blood and body fluids, vaccine preventable diseases, and tuberculosis
- Application and data reside locally at the hospital
- Data is sent to CDC

NaSH

Exposure to Blood/Body Fluids and Bloodborne Pathogens

- Based on the existing National Surveillance System for Health Care Workers (NaSH)
- Collects information on exposures to potentially infectious blood and body fluids

Development

- Needlestick surveillance committee developed list of data elements to be collected
- Based in part on:
 - current NaSH system
 - federal regulations and compliance directives
 - state regulations

Features

- Utilizes “pick lists” which allows information to be standardized and aggregated between facilities and states
- Provides reporting functions
 - state required reports
 - federally required reports
 - tailored reports for internal use

Data Access

- Each facility will have access to their data only
- MDPH will have access to statewide data
- CDC will have access to national data

Advantages

- Web based application
- Maintained centrally by CDC
- May eventually be used by facilities of various types and sizes

Main Menu

Last updated: 9/06/2001

Action	Click on Desired Option
Enter/edit Denominator Data	Denominator Summary
Enter a new patient	Patient Form
Edit an existing patient	Retrieve patient by name or med rec number Patient Form
	Retrieve patient from list List All Patients
Enter a new incident *	Retrieve patient by name or med rec number Patient Form
	Retrieve patient from list List All Patients
Edit an existing incident	List Active Incidents
View/Edit inactive incidents	List Inactive Incidents
SAS Tables, SAS Graphs, Reports	Tables
	Graphs
	Reports
Help	Help
Instructions	Procedure manual
	Instructions for web-based data reporting HIP Internet home page

Facility 999999
Demographic Information for Year 2000

Number of occupied beds

Number of inpatient days

Number of inpatient admissions

Number/FTE of employees

Number of outpatient visits

Number of procedures

Save Data

Clear Data

Main Menu

Next Year

Previous Year

NSSHCW Patient Form

Retrieve Patient by Last name, First name, SSN or idcode

Retrieve Patient

First name: Last name:

DOB: (mm) (dd) (yyyy)

Last four digits of SSN:

Comment:

Idcode (retrieve only):

Previous Patient

Next Patient

Main Menu

Save

Enter Another New Patient

Status: Active ☐ Inactive ☐

**National Surveillance System for Health Care Workers
Exposure to Blood/Body Fluids and BloodBorne Pathogens
Exposure Event Form**

Next Screen

Clear Data

Main Menu

Facility: 999999

Date of Exposure: (mm) (dd) (yyyy)

Patid: 2

Time of Exposure: (hr) (min) AM PM
 ☐ ☐

Idcode: GA03010219561234

Exposure Number: Hours on duty:

Is exposed person a temp/agency employee? ☐ Yes ☐ No

Occupation:

- ☐ Nursing Staff ☐ Technicians ☐ Medical Staff ☐ Dental Staff
☐ Ancillary Staff ☐ Student ☐ Research ☐ Clerical/Administrative Staff
☐ Other

Please select occupation category

**National Surveillance System for Health Care Workers
Exposure to Blood/Body Fluids and BloodBorne Pathogens
Exposure Event Form**

Previous Screen

Next Screen

Clear Data

Main Menu

Facility of Exposure: 999999

Idcode: GA03010219561234

Depth of injury: ☐ superficial ☐ moderate ☐ deep ☐ unknown

Blood visible on device before exposure: ☐ Yes ☐ No ☐ Unknown

Provide brand name of the device

To be added at a later date

Was the sharp a "safety device"?: ☐ Yes ☐ No ☐ Unknown

Was training in proper use
of the device provided to
the injured person
prior to the injury?

☐ Yes ☐ No ☐ Unknown

Type of safety device

To be added at a later date

**National Surveillance System for Health Care Workers
Exposure to Blood/Body Fluids and BloodBorne Pathogens
Exposure Event Form**

Previous Screen

Next Screen

Clear Data

Main Menu

Facility of Exposure: 999999

Idcode: GA03010219561234

For percutaneous injuries: What device or item caused the injury?

- ☒ **Hollow-Bore Needle** ☐ **Suture Needle**
☐ **Other Sharp Object** ☐ **Glass**
☐ **Additional dental/surgical devices** ☐ **Other device or item**

Huber needle
Hypodermic needle attached to a disposable syringe
Hypodermic needle attached to I.V. tubing
Unattached hypodermic needle
Prefilled cartridge syringe
Winged steel needle (includes butterfly type devices) attached to disposable syringe
Winged steel needle attached to a vacuum tube collection holder
Winged steel needle attached to I.V. tubing
Unattached winged steel needle
I.V. stylet
Vacuum tube collection holder/needle (includes Vacutainer type device)
Spinal or epidural needle
Bone marrow needle
Biopsy needle
Other type of hollow-bore needle
Hollow-bore needle, type unknown

When and how did the injury occur?

- ☐ Before use of the item
- ☐ During use of the item
- ☐ After use, before disposal of item
- ☐ During or after disposal of item
- ☐ Unknown

How did the injury occur (choose up to two):

**While manipulating patient
or needle/sharp**

- ☐ Patient moved and jarred device
- ☐ While inserting needle in patient
- ☐ While inserting needle in line
- ☐ While manipulating needle in patient
- ☐ While manipulating needle in line
- ☐ While withdrawing needle from patient
- ☐ While withdrawing needle from line
- ☐ Passing or transferring equipment

Collision or contact with sharp object

- ☐ Collided with co-worker or other person
- ☐ Collided with sharp
- ☐ Sharp object dropped
- ☐ Struck by detached I.V. needle

Disposal related

- ☐ While placing sharp in container,
injured by sharp being disposed
- ☐ While placing sharp in container,
injured by sharp in container
- ☐ While manipulating container

**National Surveillance System for Health Care Workers
Exposure to Blood/Body Fluids and BloodBorne Pathogens
Exposure Event Form**

Previous Screen

Save Data

Clear Data

Main Menu

Print Incident

Facility of Exposure: Idcode: GA03010219561234

What could have prevented the injury?

Optional Memo Field:

Optional Fields

Field #1:

The Massachusetts Pilot

- Includes facilities not currently participating in NaSH
- Several facilities volunteered, others were invited to participate
- Participating facilities:
 - acute care
 - long term care
 - dialysis center

The Massachusetts Pilot

- Facilities were asked to identify who would be entering and retrieving data
- Training sessions were held at each site
- No data available to date

Issues to Date

- Process of developing a web site with parties at multiple locations with multiple needs
- Confidentiality
- Institutional Review Boards

Issues to Date

- Computer access within facilities
- Denominator data
- Hospital concerns regarding use of the data

Role of Health Department

- MDPH has unrestricted access to health care facilities through licensure process
- Reporting requirements provide OHSP with a way to learn about current surveillance methods in workplaces

Role of Health Department

- MDPH can provide interpretation of data
- MDPH can use aggregate data to develop prevention strategies

Role of Health Department

- MDPH can target facilities with unusually high or low frequency
- MDPH can offer education on surveillance methods, offer ways to streamline across the state

Role of Health Department

- MDPH can facilitate sharing of information between employers
 - surveillance data
 - best practices